

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

| | | |
|---|---|----------------------|
| Expanding Access to Broadband and Encouraging |) | GN Docket No. 13-114 |
| Innovation through Establishment of an Air- |) | RM-11640 |
| Ground Mobile Broadband Secondary Service for |) | |
| Passengers Aboard Aircraft in the 14.0-14.5 GHz |) | |
| Band |) | |

**COMMENTS OF
THE GLOBAL VSAT FORUM**

Bruce A. Olcott
Preston N. Thomas
Squire Sanders (US) LLP
1200 19th Street, N.W.
Washington, D.C. 20036
(202) 626-6615

Its Attorneys

September 23, 2013

Introduction

The Global VSAT Forum (“GVF”) submits these reply comments in response to the Commission’s *Notice of Proposed Rulemaking* (“NPRM”) in GN Docket No. 13-114, which proposes authorizing an air-ground broadband service aboard aircraft in the 14.0-14.5 GHz band (“Ku-band”) on a secondary basis.¹ GVF is the leading voice of the international satellite community, comprising more than 200 members from every major region of the world and from every sector of the industry, including satellite operators, manufacturers, system integrators, and other service providers.² GVF writes in support of the comments of the Satellite Industry Association (“SIA”), EchoStar Satellite Operating Company and Hughes Network Systems, L.L.C (“EchoStar”), ViaSat, Inc. (“Viasat”), and the Boeing Company (“Boeing”), and to express GVF’s serious concerns about the technical assumptions underlying the FCC’s proposal and the significant potential impact on the operations of GVF’s members in the United States.

Discussion

As the primary user of uplink frequencies in the 14.0-14.5 GHz band, the satellite industry has a significant interest in ensuring that the proposed air-ground service is introduced, if at all, on a truly secondary basis. Today the 14.0-14.5 GHz band is used for a range of critical Fixed-Satellite Service (“FSS”) operations, including providing broadband services to aircraft and other innovative technologies. As SIA noted in its comments, the use of the Ku-band,

¹ Expanding Access to Broadband and Encouraging Innovation through Establishment of an Air Ground Mobile Broadband Secondary Service for Passengers Aboard Aircraft in the 14.0-14.5 GHz Band, GN Docket No. 13-114, RM-11640, Notice of Proposed Rulemaking, FCC 13-66 (2013).

² A complete list of GVF members is available at <http://www.gvf.org/about-gvf/membersdirectory.html>.

including the 14.0-14.5 GHz band, by satellite services provides significant financial benefits to the North American economy (not to mention worldwide) and these benefits continue to grow. These financial benefits are complemented by the public interest benefits provided to U.S. consumers by the wide range of services that are offered by the satellite industry in this important band. Accordingly, the FCC must take the impact of the introduction of an air-ground service, even on a secondary basis, into account in determining whether the viability of these services justifies a new allocation. If the FCC does decide that a secondary allocation for air-ground service is warranted, any action by the FCC to allow the use of air-ground services in the Ku-band must ensure that important Ku-band satellite services are protected and have the ability to continue to grow.

As the record reflects, in order to protect the incumbent primary FSS from the potential for interference, the FCC will need to adopt a protection level as well as strict technical rules to successfully enable continued operation of FSS networks.³ SIA explains that the protection values offered by Qualcomm for both geostationary orbit (“GSO”) and non-geostationary orbit (“NGSO”) satellites are inconsistent with ITU-R Recommendation S.1432.⁴ The record demonstrates that there is the potential for unacceptable interference to FSS NGSO networks that the FCC must consider before a new air-ground service may be authorized in the Ku-band. Accordingly, GVF supports comments explaining that the record requires further investigation

³ GVF believes the FCC must adopt a hard protection value to ensure the protection of the GSO FSS networks.

⁴ *Comments of SIA*, GN Docket No. 13-114, at 4 (August 26, 2013).

into the impact of proposed air-ground services in the Ku-band with regard to potential interference to GSO and future NGSO systems.⁵

There is insufficient data in the NPRM and the record to determine what appropriate technical rules should be put in place to protect the FSS from the potential air-ground service. Establishing rules that contain adequate protection would largely be driven by the number and type of air-ground licensees the FCC decides to authorize. Although EchoStar has proposed that the rules for Vehicle Mounted Earth Stations (“VMES”) and Earth Stations Aboard Aircraft (“ESAA”) could be used as a template,⁶ further comment would be needed to allow a full consideration in the record of the proposed rules.

Several commenters explain that any action on a new service in the 14.0-14.5 GHz band must be contingent upon finalizing the primary status of ESAA. United Airlines, Delta Airlines and Boeing⁷ each urge the Commission to recognize the importance of ESAA in-flight broadband and to promote future investment by acting on its proposal to elevate ESAA to primary status in the 14.0-14.5 GHz band.⁸ Because the majority of the proposed air-ground service’s protections for FSS services apply to primary FSS, the measures will likely not

⁵ See *Comments of Gogo*, GN Docket No. 13-114, at 18 (August 26, 2013); *Comments of ViaSat*, GN Docket No. 13-114, at 4-7 (August 26, 2013); *SIA Comments*, GN Docket No. 13-114, at 13-16 (August 26, 2013).

⁶ *Comments of EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC*, GN Docket No. 13-114, at 9 (August 26, 2013).

⁷ See *Comments of United Airlines*, GN Docket No. 13-114, at 8 (August 26, 2013); *Comments of Delta Airlines*, GN Docket No. 13-114, at 7 (August 26, 2013); *Comments of The Boeing Company*, GN Docket No. 13-114, at 3 (August 26, 2013).

⁸ *Revisions to Parts 2 and 25 of the Commission’s Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands*, IB Docket No. 12-376, Notice of Proposed Rulemaking and Report and Order, FCC 12-161, ¶ 142 (2012).

adequately protect critical ESAA Earth-to-space uplink transmissions.⁹ The Commission should therefore resolve the status of ESAA by elevating it to primary status in the 14.0-14.5 GHz band before taking any further action on the proposed secondary air-ground service.

Finally, as the comments of Boeing indicate, the record thus far leaves significant doubt as to whether the proposed air-ground service can achieve commercially viable service within the operational requirements of secondary status.¹⁰ To support its proposal for access to the intensively-used 14.0-14.5 GHz band, Qualcomm appears to have relied on highly optimistic claims regarding the ability of the proposed air-ground service to operate on an unprotected basis in the presence of ubiquitous FSS operations. The satellite and aviation industries, as well as the industries and consumers that rely on them, would be harmed by the proposed introduction of a service which could well prove to be unworkable. The FCC should therefore refrain from adopting the proposed air-ground service until an in-depth review of Qualcomm's claims can resolve or substantiate the industry's concerns.

Once the record is supplemented, GVF urges the FCC to carefully evaluate the proposed secondary use of the 14.0-14.5 GHz band by the air-ground service and adopt this allocation only if appropriate protections are included to ensure that primary FSS is fully protected and that FSS network operators can continue to provide innovative and cost-effective services to U.S. industry and consumers. To this end, GVF urges the FCC to adopt rules that: 1) make clear the limited nature of the secondary rights being afforded to air-ground licensees; 2) enact strict technical criteria to protect FSS from the potential for interference; and 3) establish appropriate enforcement mechanisms for any violations of air-ground technical rules. As the record in this

⁹ *Comments of The Boeing Company*, at 4.

¹⁰ *Id.*, at 8.

proceeding reflects, in order to adopt appropriate interference protections, it is also necessary for the FCC to seek additional comments on the very real technical issues that are raised in the record.

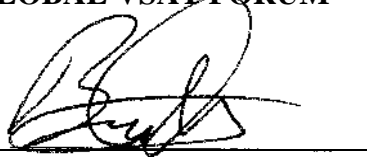
Conclusion

Based on the foregoing, GVF respectfully requests that the FCC carefully consider whether it is in the public interest to adopt rules authorizing the secondary use of the 14.0-14.5 GHz band by the proposed air-ground service. Should the FCC find that the proposed service is consistent with the public interest, the FCC must seek additional comment and validation on key technical assumptions, and adopt an enforceable regulatory framework that provides true protection to primary FSS networks.

Respectfully submitted,

THE GLOBAL VSAT FORUM

By:



Bruce A. Olcott
Preston N. Thomas
Squire Sanders (US) LLP
1200 19th Street, N.W.
Washington, D.C. 20036
(202) 626-6615

Its Attorneys

September 23, 2013